Tripp Lite
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SmartOnline 208/120V or 240/120V 16kVA 11.2kW On-Line Double-Conversion UPS, Extended Run, SNMP, Webcard, 8U Rack/Tower, USB, DB9 Serial

MODEL NUMBER: **SU16000RT4U**

Highlights

- 16kVA / 16,000VA / 11,200W on-line double-conversion UPS, split phase input
- 208/120V or 240/120V +/-3% output at 60Hz, 94% Efficient Economy-mode option
- 8U Rack/Tower compatible; Hot-swappable power and battery modules
- USB, RS232 & EPO ports; support for SNMP/WEB card options
- Front panel LEDs with detailed LCD monitoring and control screen
- Expandable runtime with optional external battery packs
- Hardwire input (4 wire split phase); L6-30R, C19 & 5-15/20R outlets

Package Includes

- SU16000RT4UPM UPS Power Module
- BP192V18-4U External battery pack
- SUPDMB16K Detachable PDU with manual bypass switch
- 4 post rackmount installation brackets

Description

Tripp Lite 16kVA SmartOnline Hot-Swappable Modular Rack/Tower UPS offers 16,000 VA on-line, double-conversion UPS support for server, network and telecommunications equipment. Maintains battery-derived AC output during blackouts with active, full-time power conditioning. Fault-tolerant auto-bypass prevents unexpected service interruptions during overload or internal fault conditions. 4U power module and 4U external battery pack installs in 8 rack spaces (8U). Upright tower installation supported with optional accessories. Maintains full-time sine wave output within 3% of selectable 208/120 or 240/120V AC. Corrects brownouts and overvoltages from 65V to 140V (L-N). Expandable runtime with optional external battery packs. Converts raw input from AC to DC, then resynthesizes output power back to perfect sine wave AC output with enhanced protection from harmonic distortion, fast electrical impulses and other hard-to-solve power problems not addressed by other UPS types. Highly efficient operation in optional economy mode setting, saving BTU heat output and energy costs. Network-grade AC surge and noise suppression. Network management interfaces include combination DB9 RS-232 enabled and dry contact serial port, enhanced USB port and SNMPWEBCARD slot. HID-compliant USB interface enables integration with built-in power management and auto shutdown features of Windows and Mac OS X. Supports simultaneous detailed monitoring of equipment load levels, self-test data and utility power conditions via all 3 network interfaces. Includes PowerAlert monitoring software and complete cabling. Supports Emergency Power Off (EPO) via built-in interface. Front panel LEDs and LCD readout with scroll controls support visual monitoring of all major UPS functions. LED/LCD display panel easily rotates for viewing in rackmount or tower configurations. Split phase 4 conductor hardwire input and output supported. UPS supported outlets include two L6-30R, six C19 and 5 low voltage 5-15/20R. Output connections are mounted on a detachable backplate with manual bypass switch to enable hot-swappable UPS replacement without powering off connected equipment. External battery packs are field replaceable and hot swappable. Attractive all-black color scheme. $250,000 Ultimate Lifetime Insurance (U.S., Canada, and Puerto Rico only).

Features

- True online, double-conversion UPS provides pure, full-time sine wave AC output free of surges, voltage fluctuations and line noise
- 16,000 VA/11,200 watt output power capacity with dual voltage output of 208/120 or 240/120V
- 4U high power density power module and 4U external battery pack supports rackmount installation in 8 rack spaces

- Dual conversion UPS actively converts raw input from AC to DC, then back to perfect sine wave AC output with enhanced protection from harmonic distortion, fast electrical impulses and other hard-to-solve power problems not addressed by other UPS types
- Hardwire input terminals, hardwire output and output receptacles are mounted on a detachable backplate with manual bypass switch to enable hot-swappable UPS replacement without powering off connected equipment
- Provides perfectly regulated, sine wave output power free of line noise, transient surges and frequency variation for the most efficient operation of critical servers, networking and telecommunications equipment
- Maintains output within 3% of selected 208/120 or 240/120V nominal voltage during brownouts and overvoltages
- Supports connected equipment during blackouts for 12/5 minutes at half/full load levels, runtime is further expandable with optional external BP192V18-4U battery packs
- Some external battery configurations require the use of Tripp Lite's External Battery Configuration Software (see manual)
- Highly efficient economy mode option
- Network interfaces support simultaneous communications via DB9 port, USB port and SNMPWEBCARD slot. DB9 port supports RS-232 and dry contact messaging. HID-compliant USB interface enables integration with built-in power management and auto shutdown features of Windows and Mac OS X.
- Included PowerAlert UPS monitoring software supports safe unattended shutdown, monitoring and control via local connected servers, plus any number of additional servers over IP
- Communications ports support on-battery, low-battery, power-restored, AC-voltage, DC-voltage, output current monitoring, battery charge current, battery capacity, AC line frequency, timed inverter shutoff, activate self-test and output power control
- Built-in Emergency Power Off (EPO) interface with cable
- Includes 13 output receptacles (2 L6-30R, 6 C19, 5 NEMA 5-15/20R) plus hardwire output, all of which are available for simultaneous use
- Split phase, 4 conductor hardwire input connection (featured on included detachable PDU).
- Front panel LEDs and LCD readout with scroll button enables visual confirmation of all major UPS functions and current site electrical conditions
- Front panel switches enable power on/off control, self-test and alarm cancel functions
- Included adjustable mounting rails support installation in 4 post 19 inch rack enclosures
- Optional 2POSTRMKITHD enables 2 post rackmount installation
- Optional 2-9USTAND set of tower stands supports upright tower installation
- Fault tolerant electronic bypass maintains utility output during a variety of UPS fault conditions
- $250,000 Ultimate Lifetime Insurance (U.S., Canada, and Puerto Rico only)

Specifications

General Info	
RoHS	Y
OUTPUT	
Output Capacity Details	16,000VA, 11,200W (240V) / 13,860VA, 11,200W (208V); Supports up to 105% load continuously in double conversion mode, 106 to 125% for 3 minutes, 126 to 150% for 30 seconds; Loads over 150% trigger immediate bypass mode operation to support equipment directly from mains power; Double conversion mode is automatically restored as the overload is cleared
Output Volt Amp Capacity (VA)	16000
Output kVA Capacity (kVA)	16
Output Watt Capacity (Watts)	11200
Output kW Capacity (kW)	11.2

Power Factor	0.7
Crest Factor	3:1
Nominal Output Voltage(s) Supported	120V; 208V; 240V
Nominal Voltage Details	240/120V or 208/120V split phase output
Frequency Compatibility	60 Hz
Output Voltage Regulation (Line Mode)	+/- 3%
Output Voltage Regulation (Economy Line Mode)	+/- 10%
Output Voltage Regulation (Battery Mode)	+/- 3%
Output Receptacles	(5) 5-15/20R; (2) L6-30R; (6) C19; Hardwire
Output Receptacle Details	Supports North American 208/120V or 240/120V split-phase hardwire output (L1, L2, N, G)
Output Circuit Breakers	20A branch rated double pole breakers (x3) protect 2 C19 and 1 5-15/20R outlets each, 30A branch rated double pole breakers (x2) protect 1 L6-30R outlet each, 20A single pole breakers (x2) protect one 5-15/20R outlet each
Output AC Waveform (AC Mode)	Pure Sine wave
Output AC Waveform (Battery Mode)	Pure Sine wave
INPUT	
Rated input current (Maximum Load)	68A
Nominal Input Voltage(s) Supported	208V AC / 120V AC (4 wire split single phase); 240V AC /120V AC (4 wire split single phase)
UPS Input Connection Type	Hardwire
UPS Input Connection Description	4 wire split-phase input (L1, L2, N, G)
Recommended Electrical Service	70A 208/240-120 Split Phase
Input Phase	Single-Phase
BATTERY	
Full Load Runtime (min.)	5 min. (11,200w)
Half Load Runtime (min.)	12 min. (5600w)
Expandable Battery Runtime	Supports extended runtime with optional external battery packs
External Battery Pack Compatibility	BP192V18-4U ; BP192V557C-16K ; BP192V787C-16K ; BP192V1037C-16K ; BP192V1407C-16K
DC System Voltage (VDC)	192
Battery Recharge Rate (Included Batteries)	Less than 6 hours from 10% to 80% (typical, full load discharge)
Battery Replacement Description	Hot-swappable, user replaceable batteries
VOLTAGE REGULATION	
Voltage Regulation Description	+/-3% output voltage regulation in online, double-conversion mode

Overvoltage Correction	Corrects overvoltages to 140 (measured L1-N : L2-N)
Undervoltage Correction	Corrects undervoltages to 65V (measured L1-N : L2-N)
USER INTERFACE, ALERTS & CONTROLS	
Front Panel LCD Display	Selectable LCD display with scroll and selection buttons enables UPS control and detailed monitoring options; LED/LCD panel rotates for viewing in rack/tower formats
Switches	2 Switches control off/on power status and alarm-cancel/self-test operation; 2 additional switches support set and execute scrolling LCD functions; bundled PDU includes bypass switch to enable hot-swap UPS power module replacement
Alarm Cancel Operation	Alarm cancel switch
Audible Alarm	Unique audible alarms for all major UPS, environmental and power conditions (see manual)
LED Indicators	6 LEDs indicate line power, online mode, economy/bypass mode, on-battery, charger and AC output status; LCD screen offers additional information and control options
SURGE / NOISE SUPPRESSION	
UPS AC Suppression Response Time	Instantaneous
EMI / RFI AC Noise Suppression	Yes
PHYSICAL	
Included Mounting Accessory Description	2 sets of adjustable 4 post rack rails included
Installation Form Factors Supported with Optional Accessories	2 post rackmount (2POSTRMKITHD); Tower (2-9USTAND)
Optional Mounting Accessory Notes	2 sets of 2POSTRMKITHD required for 2 post rackmount installation of separate power module and battery pack
Primary Form Factor	Rackmount
UPS Power Module Dimensions (hwd, in.)	7 x 17.5 x 33.9
UPS Power Module Dimensions (hwd, cm)	17.8 x 44.4 x 86.1
Installed Whole System Maximum Rack Depth (in.)	40.5
Installed Whole System Maximum Rack Depth (cm)	102.9
Rack Height (U Spaces)	8
UPS Power Module Weight (lbs.)	86
UPS Power Module Weight (kg)	39
UPS Dimensions Details	Includes 4U battery pack, 4U power module and detachable output PDU; Installed whole system rack depth specification indicates the depth of the UPS power module with the PDU attached
Included Battery Pack Dimensions (hwd / in.)	7 x 17.5 x 27.8
Included Battery Pack Dimensions (hwd / cm)	17.7 x 44.4 x 70.6

Included Battery Pack Weight (lbs.)	239
Included Battery Pack Weight (kg)	108.5
UPS Shipping Dimensions (hwd / in.)	45.5 x 23.5 x 34.3
UPS Shipping Dimensions (hwd / cm)	115.6 x 59.7 x 87.1
Shipping Weight (lbs.)	448.8
Shipping Weight (kg)	203.8
Cooling Method	Fan
UPS Housing Material	Steel
ENVIRONMENTAL	
Operating Temperature Range	+32 to +104 degrees Fahrenheit / 0 to +40 degrees Celsius.
Storage Temperature Range	+5 to +122 degrees Fahrenheit / -15 to +50 degrees Celsius.
Relative Humidity	0 to 95%, non-condensing
AC Mode BTU / Hr. (Full Load)	5715
AC Economy Mode BTU / Hr. (Full Load)	2441
Battery Mode BTU / Hr. (Full Load)	4249
AC Mode Efficiency Rating (100% Load)	87%
AC Economy Mode Efficiency Rating (100% Load)	94%
Operating Elevation (ft.)	0-3000m (0 to 10,000 ft.)
Audible Noise	60 dBA at front side 1 meter
Operating Elevation (m)	0-3000 m
COMMUNICATIONS	
Communications Interface	USB (HID enabled); DB9 Serial; Contact closure; EPO (emergency power off); Slot for SNMP/Web interface
Network Monitoring Port Description	RS232 and contact closure communications are supported on one DB9 port
PowerAlert Software	Included
Communications Cable	USB and DB9 cabling included
LINE / BATTERY TRANSFER	
Transfer Time	No transfer time (0 ms.) in online, double-conversion mode
Transfer Time (Economy Mode)	2 milliseconds typical in optional economy mode
Low Voltage Transfer to Battery Power (Setpoint)	65V (L1-N:L2-N)
High Voltage Transfer to Battery Power (Setpoint)	140V (L1-N:L2-N)

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SPECIAL FEATURES	
Cold Start (Startup in Battery Mode During a Power Failure)	Cold-start operation supported
High Availability UPS Features	Automatic inverter bypass; Manual bypass switch; Detachable hot-swap PDU; Hot swappable UPS power module; Hot swappable batteries
Green Energy-Saving Features	High efficiency economy mode operation; Schedulable daily hours of economy mode operation
CERTIFICATIONS	
UPS Certifications	Tested to UL1778 (USA); Tested to CSA (Canada); Tested to NOM (Mexico); Meets FCC Part 15 Category A (EMI)
WARRANTY	
Product Warranty Period (Worldwide)	2-year limited warranty

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